# BioMap and Living Waters

# Guiding Land Conservation for Biodiversity in Massachusetts

# **Core Habitats of West Stockbridge**

This report and associated map provide information about important sites for biodiversity conservation in your area.

This information is intended for conservation planning, and is <u>not</u> intended for use in state regulations.

Produced by:

Natural Heritage & Endangered Species Program
Massachusetts Division of Fisheries and Wildlife
Executive Office of Environmental Affairs
Commonwealth of Massachusetts

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#### **Table of Contents**

#### Introduction

What is a Core Habitat?

Core Habitats and Land Conservation

In Support of Core Habitats

Understanding Core Habitat Species, Community,

and Habitat Lists

What's in the List?

What does 'Status' mean?

**Understanding Core Habitat Summaries** 

Next Steps

**Protecting Larger Core Habitats** 

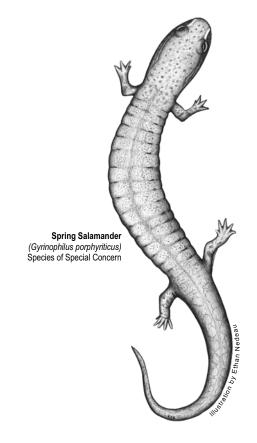
Additional Information

Local Core Habitat Information\*

BioMap: Species and Natural Communities

BioMap: Core Habitat Summaries Living Waters: Species and Habitats Living Waters: Core Habitat Summaries

\* Depending on the location of Core Habitats, your city or town may not have all of these sections.



Funding for this project was made available by the Executive Office of Environmental Affairs, contributions to the Natural Heritage & Endangered Species Fund, and through the State Wildlife Grants Program of the US Fish & Wildlife Service.



Guiding Land Conservation for Biodiversity in Massachusetts

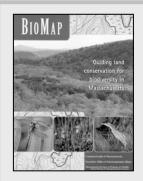
#### Introduction

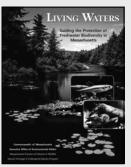
In this report, the Natural Heritage & Endangered Species Program provides you with site-specific biodiversity information for your area. Protecting our biodiversity today will help ensure the full variety of species and natural communities that comprise our native flora and fauna will persist for generatons to come.

The information in this report is the result of two statewide biodiversity conservation planning projects, BioMap and Living Waters. The goal of the BioMap project, completed in 2001, was to identify and delineate the most important areas for the long-term viability of terrestrial, wetland, and estuarine elements of biodiversity in Massachusetts. The goal of the Living Waters project, completed in 2003, was to identify and delineate the rivers, streams, lakes, and ponds that are important for freshwater biodiversity in the Commonwealth. These two conservation plans are based on documented observations of rare species, natural communities, and exemplary habitats.

#### What is a Core Habitat?

Both BioMap and Living Waters delineate Core *Habitats* that identify the most critical sites for biodiversity conservation across the state. Core Habitats represent habitat for the state's most viable rare plant and animal populations and include exemplary natural communities and aquatic habitats. Core Habitats represent a wide diversity of rare species and natural communities (see Table 1), and these areas are also thought to contain virtually all of the other described species in Massachusetts. Statewide, BioMap Core Habitats encompass 1,380,000 acres of uplands and wetlands, and Living Waters identifies 429 Core Habitats in rivers, streams, lakes, and ponds.





Get your copy of the BioMap and Living Waters reports! Contact Natural Heritage at 508-792-7270, Ext. 200 or email natural.heritage@state.ma.us. Posters and detailed technical reports are also available.

#### **Core Habitats and Land Conservation**

One of the most effective ways to protect biodiversity for future generations is to protect Core Habitats from adverse human impacts through land conservation. For Living Waters Core Habitats, protection efforts should focus on the *riparian areas*, the areas of land adjacent to water bodies. A naturally vegetated buffer that extends 330 feet (100 meters) from the water's edge helps to maintain cooler water temperature and to maintain the nutrients, energy, and natural flow of water needed by freshwater species.

#### In Support of Core Habitats

To further ensure the protection of Core Habitats and Massachusetts' biodiversity in the long-term, the BioMap and Living Waters projects identify two additional areas that help support Core Habitats.

In BioMap, areas shown as Supporting Natural *Landscape* provide buffers around the Core Habitats, connectivity between Core Habitats, sufficient space for ecosystems to function, and contiguous undeveloped habitat for common species. Supporting Natural Landscape was



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# BioMap and Living Waters:

#### Guiding Land Conservation for Biodiversity in Massachusetts

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generated using a Geographic Information Systems (GIS) model, and its exact boundaries are less important than the general areas that it identifies. Supporting Natural Landscape represents potential land protection priorities once Core Habitat protection has been addressed.

In Living Waters, *Critical Supporting Watersheds* highlight the immediate portion of the watershed that sustains, or possibly degrades, each freshwater Core Habitat. These areas were also identified using a GIS model. Critical Supporting Watersheds represent developed and undeveloped lands, and can be quite large. Critical Supporting Watersheds can be helpful in land-use planning, and while they are not shown on these maps, they can be viewed in the Living Waters report or downloaded from <a href="https://www.mass.gov/mgis">www.mass.gov/mgis</a>.

# **Understanding Core Habitat Species, Community, and Habitat Lists**

#### What's in the List?

Included in this report is a list of the species, natural communities, and/or aquatic habitats for each Core Habitat in your city or town. The lists are organized by Core Habitat number.

For the larger Core Habitats that span more than one town, the species and community lists refer to the <u>entire</u> Core Habitat, not just the portion that falls within your city or town. For a list of <u>all</u> the state-listed rare species within your city or town's boundary, whether or not they are in Core Habitat, please see the town rare species lists available at <u>www.nhesp.org</u>.

The list of species and communities within a Core Habitat contains <u>only</u> the species and

**Table 1.** The number of rare species and types of natural communities explicitly included in the BioMap and Living Waters conservation plans, relative to the total number of native species statewide.

BioMap		
	Species and Verified Natural Community Types	
Biodiversity Group	Included in BioMap	Total Statewide
Vascular Plants	246	1,538
Birds	21	221 breeding species
Reptiles	11	25
Amphibians	6	21
Mammals	4	85
Moths and Butterflies	52	An estimated 2,500 to 3,000
Damselflies and Dragonflies	25	An estimated 165
Beetles	10	An estimated 2,500 to 4,000
Natural Communities	92	> 105 community types
Living Waters		
	Species	
Biodiversity Group	Included in Living Waters	Total Statewide
Aquatic		
Vascular Plants	23	114
Fishes	11	57
Mussels	7	12
Aquatic Invertebrates	23	An estimated > 2500

natural communities that were explicitly included in a given BioMap or Living Waters Core Habitat. Other rare species or examples of other natural communities may fall within the Core Habitat, but for various reasons are not included in the list. For instance, there are a few rare species that are omitted from the list or summary because of their particular sensitivity to the threat of collection. Likewise, the content of many very small Core Habitats are not described in this report or list, often because they contain a single location of a rare plant



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# BioMap and Living Waters:

#### Guiding Land Conservation for Biodiversity in Massachusetts

species. Some Core Habitats were created for suites of common species, such as forest birds, which are particularly threatened by habitat fragmentation. In these cases, the individual common species are not listed.

#### What does 'Status' mean?

The Division of Fisheries and Wildlife determines a status category for each rare species listed under the Massachusetts Endangered Species Act, M.G.L. c.131A, and its implementing regulations, 321 CMR 10.00. Rare species are categorized as Endangered, Threatened, or of Special Concern according to the following:

- Endangered species are in danger of extinction throughout all or a significant portion of their range or are in danger of extirpation from Massachusetts.
- *Threatened* species are likely to become Endangered in Massachusetts in the foreseeable future throughout all or a significant portion of their range.
- **Special Concern** species have suffered a decline that could threaten the species if allowed to continue unchecked or occur in such small numbers or with such restricted distribution or specialized habitat requirements that they could easily become Threatened in Massachusetts.

In addition, the Natural Heritage & Endangered Species Program maintains an unofficial watch list of plants that are tracked due to potential conservation interest or concern, but are not regulated under the Massachusetts Endangered Species Act or other laws or regulations. Likewise, described natural communities are not regulated any laws or regulations, but they can help to identify ecologically important areas that are worthy of protection. The status of natural

#### **Legal Protection of Biodiversity**

BioMap and Living Waters present a powerful vision of what Massachusetts would look like with full protection of the land that supports most of our biodiversity. To create this vision, some populations of state-listed rare species were deemed more likely to survive over the long-term than others.

Regardless of their potential viability, all sites of state-listed species have full legal protection under the Massachusetts Endangered Species Act (M.G.L. c.131A) and its implementing regulations (321 CMR 10.00). Habitat of state-listed wildlife is also protected under the Wetlands Protection Act Regulations (310 CMR 10.37 and 10.59). The *Massachusetts Natural Heritage Atlas* shows Priority Habitats, which are used for regulation under the Massachusetts Endangered Species Act and Massachusetts Environmental Policy Act (M.G.L. c.30) and Estimated Habitats, which are used for regulation of rare wildlife habitat under the Wetlands Protection Act. For more information on rare species regulations, see the *Massachusetts Natural Heritage Atlas*, available from the Natural Heritage & Endangered Species Program in book and CD formats.

BioMap and Living Waters are conservation planning tools and do not, in any way, supplant the Estimated and Priority Habitat Maps which have regulatory significance. Unless and until the combined BioMap and Living Waters vision is fully realized, we must continue to protect all populations of our state-listed species and their habitats through environmental regulation.

communities reflects the documented number and acreages of each community type in the state:

- Critically Imperiled communities typically have 5 or fewer documented sites or have very few remaining acres in the state.
- *Imperiled* communities typically have 6-20 sites or few remaining acres in the state.
- *Vulnerable* communities typically have 21-100 sites or limited acreage across the state.
- **Secure** communities typically have over 100 sites or abundant acreage across the state; however excellent examples are identified as Core Habitat to ensure continued protection.



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# Understanding Core Habitat Summaries

Following the BioMap and Living Waters Core Habitat species and community lists, there is a descriptive summary of each Core Habitat that occurs in your city or town. This summary highlights some of the outstanding characteristics of each Core Habitat, and will help you learn more about your city or town's biodiversity. You can find out more information about many of these species and natural communities by looking at specific *fact sheets* at <a href="https://www.nhesp.org">www.nhesp.org</a>.

#### **Next Steps**

BioMap and Living Waters were created in part to help cities and towns prioritize their land protection efforts. While there are many reasons to conserve land – drinking water protection, recreation, agriculture, aesthetics, and others – BioMap and Living Waters Core Habitats are especially helpful to municipalities seeking to protect the rare species, natural communities, and overall biodiversity within their boundaries. Please use this report and map along with the rare species and community fact sheets to appreciate and understand the biological treasures in your city or town.

#### **Protecting Larger Core Habitats**

Core Habitats vary considerably in size. For example, the average BioMap Core Habitat is 800 acres, but Core Habitats can range from less than 10 acres to greater than 100,000 acres. These larger areas reflect the amount of land needed by some animal species for breeding, feeding, nesting, overwintering, and long-term survival. Protecting areas of this size can be

very challenging, and requires developing partnerships with neighboring towns.

Prioritizing the protection of certain areas within larger Core Habitats can be accomplished through further consultation with Natural Heritage Program biologists, and through additional field research to identify the most important areas of the Core Habitat.

#### **Additional Information**

If you have any questions about this report, or if you need help protecting land for biodiversity in your community, the Natural Heritage & Endangered Species Program staff looks forward to working with you.

Contact the Natural Heritage & Endangered Species Program:

by Phone 508-792-7270, Ext. 200

by Fax: 508-792-7821

by Email: natural.heritage@state.ma.us.

by Mail: North Drive

Westborough, MA 01581

The GIS datalayers of BioMap and Living Waters Core Habitats are available for download from MassGIS: www.mass.gov/mgis

Check out www.nhesp.org for information on:

- Rare species in your town
- Rare species fact sheets
- BioMap and Living Waters projects
- Natural Heritage publications, including:
  - Field guides
  - \* Natural Heritage Atlas, and more!



Massachusetts Division of Fisheries and Wildlife

## West Stockbridge

#### Core Habitat BM713

**Plants** 

Common Name Scientific Name <u>Status</u>

Barren Strawberry Waldsteinia fragarioides Special Concern

Fen Sedge Carex tetanica Special Concern

Hitchcock's Sedge Carex hitchcockiana Special Concern

Eleocharis intermedia Intermediate Spike-Sedge Threatened

Vertebrates

Common Name Scientific Name Status

Jefferson Salamander Ambystoma jeffersonianum Special Concern

Pied-Billed Grebe Podilymbus podiceps Endangered

Spring Salamander Gyrinophilus porphyriticus Special Concern

Wood Turtle Clemmys insculpta Special Concern

#### Core Habitat BM759

**Natural Communities** 

Scientific Name Common Name Status

Transitional Floodplain Forest Imperiled

**Plants** 

Common Name Scientific Name Status

Arborvitae Thuja occidentalis Endangered

**Downy Wood-Mint** Blephilia ciliata Endangered

Green Dragon Arisaema dracontium Threatened

Hairy Wood-Mint Blephilia hirsuta Endangered

Labrador Bedstraw Galium labradoricum Threatened

Houstonia longifolia var longifolia Long-Leaved Bluet Endangered

Sanicula odorata Threatened Long-Styled Sanicle

Schweinitz's Sedge Carex schweinitzii Endangered



Massachusetts Division of Fisheries and Wildlife

North Drive, Westborough, MA 01581 Tel: (508) 792-7270, Ext. 200 Fax: (508) 792-7821

http://www.nhesp.org

West Stockbridge

Woodland Millet Milium effusum Threatened

Vertebrates

<u>Common Name</u> <u>Scientific Name</u> <u>Status</u>

Bat Hibernaculum ------

Jefferson Salamander Ambystoma jeffersonianum Special Concern

Wood Turtle Clemmys insculpta Special Concern

Core Habitat BM762

**Plants** 

<u>Common Name</u> <u>Scientific Name</u> <u>Status</u>

Small Site for Rare Plant

**Core Habitat BM766** 

**Plants** 

<u>Common Name</u> <u>Scientific Name</u> <u>Status</u>

Small Site for Rare Plant

Core Habitat BM768

**Plants** 

Common Name Scientific Name Status

Small Site for Rare Plant

Core Habitat BM775

**Plants** 

Common Name Scientific Name Status

Small Site for Rare Plant

**Core Habitat BM780** 

**Plants** 

Common Name Scientific Name Status

Small Site for Rare Plant



Massachusetts Division of Fisheries and Wildlife

## West Stockbridge

#### **Core Habitat BM783**

**Natural Communities** 

<u>Common Name</u> <u>Scientific Name</u> <u>Status</u>

Rich, Mesic Forest Community Vulnerable

Core Habitat BM786

Vertebrates

<u>Common Name</u> <u>Scientific Name</u> <u>Status</u>

American Bittern Botaurus lentiginosus Endangered

**Core Habitat BM794** 

**Plants** 

<u>Common Name</u> <u>Scientific Name</u> <u>Status</u>

Gattinger's Panic-Grass Panicum gattingeri Special Concern

Great Blue Lobelia Lobelia siphilitica Endangered

Sensitive Rare Plant

Smooth Rock-Cress Arabis laevigata Threatened

Vertebrates

Common Name Scientific Name Status

Jefferson Salamander Ambystoma jeffersonianum Special Concern

Core Habitat BM801

**Plants** 

Common Name Scientific Name Status

Small Site for Rare Plant



# West Stockbridge

#### Core Habitat BM821

**Natural Communities** 

<u>Common Name</u> <u>Scientific Name</u> <u>Status</u>

Acidic Rocky Summit/Rock Outcrop Secure

Community

Ridgetop Pitch Pine - Scrub Oak Imperiled

Community

**Plants** 

<u>Common Name</u> <u>Scientific Name</u> <u>Status</u>

Small Site for Rare Plant

**Core Habitat BM827** 

**Plants** 

Common Name Scientific Name Status

Small Site for Rare Plant



# **BioMap: Core Habitat Summaries**

# West Stockbridge

#### **Core Habitat BM713**

This is a diverse Core Habitat for Wood Turtles, Jefferson Salamanders, Spring Salamanders, and Pied-billed Grebes. Wetlands here also support three rare species of sedges. The Core Habitat encompasses several miles of meandering brooks, riparian wetlands, ponds, and uplands in Richmond and West Stockbridge, most of which remains unprotected.

#### **Plants**

This Core Habitat supports a diversity of plants, including three rare members of the sedge family that grow within wetlands found here.

#### Vertebrates

Meandering reaches of Cone Brook and Baldwin Brook, and adjacent wet meadows, upland forests, and fields provide habitat for Wood Turtles. Conservation efforts for Wood Turtles should seek to preserve unbroken, undeveloped corridors extending at least 600 yards out from streams and brooks. Vernal pools in the mature deciduous and mixed forests in this area provide habitat for Jefferson Salamanders. Spring Salamanders may be present in coldwater brooks and headwater seeps. The deep freshwater marsh along the edges of Cranberry Pond provides breeding and migration habitat for Pied-billed Grebes and other wetland birds.

#### **Core Habitat BM759**

This Core Habitat encompasses riverside and upland habitats along the Williams River and a section of the Housatonic River in Great Barrington. This long stretch of riparian habitat is particularly important for Wood Turtles. Wetland and upland habitats here also support Jefferson Salamanders, overwintering bats, and several important rare plant populations. Included along the shores of the Housatonic River is a good example of the unusual Transitional Floodplain Forest community. The majority of this Core Habitat appears to be unprotected.

#### **Natural Communities**

This large Core Habitat contains a good example of a Transitional Floodplain Forest on the shore of the Housatonic River in Great Barrington. Transitional Floodplain Forests are riverside Silver Maple-Green Ash-American Elm forests that experience annual floods. Of the three floodplain forest community types, these communities are intermediate in vegetation and soils. This Core Habitat contains one of only five good-quality Transitional Floodplain Forests known in the state.

#### **Plants**

Quite a diversity of rare plant species are found within this Core Habitat, including two Endangered species of wood-mint. Also present is one of the state's most viable populations of the delicate grass, Woodland Millet.



# **BioMap: Core Habitat Summaries**

## West Stockbridge

#### Vertebrates

This Core Habitat provides significant habitat for Wood Turtles and Jefferson Salamanders. Wood Turtle habitat can be found in the nearly 12 contiguous miles of meandering rivers and streams bordered by oxbow wetlands, wet meadows, shrub swamps, upland forests, and fields. Seasonal pools and other small, isolated wetlands surrounded by deciduous or mixed forest provide habitat for Jefferson Salamanders. This Core Habitat also encompasses upland forest surrounding a bat overwintering site, known as a hibernaculum.

#### **Core Habitat BM783**

#### **Natural Communities**

This Core Habitat contains a good example of a Rich, Mesic Forest. Rich, Mesic Forests are a variant of northern hardwood forests dominated by Sugar Maple with a diverse herbaceous layer and many spring ephemerals, unusual plants that appear only in spring, in a moist, nutrient-rich environment. The forest here is embedded within a 1,800-acre roadless area of natural vegetation.

#### Core Habitat BM786

#### Vertebrates

This beaver-created shallow freshwater marsh and shrub swamp along the headwaters of Alford Brook at West Stockbridge Center provide habitat for American Bitterns and other wetland birds. This wetland and adjacent uplands are not currently in protected status as conservation land

#### Core Habitat BM794

This Core Habitat straddles the towns of Stockbridge and West Stockbridge in the vicinity of Mohawk Lake and the upper reaches of Mohawk Brook. It contains a diversity of habitats that support Jefferson Salamanders, as well as wide array of rare plant species such as the beautiful Great Blue Lobelia.

#### **Plants**

A number of rare plant species inhabit different community types within this Core Habitat. The showy Great Blue Lobelia is found in lowland areas, while Smooth Rock-Cress inhabits upper slopes and ledges.

#### Vertebrates

This Core Habitat encompasses Mohawk Lake and the upper reaches of Mohawk Brook. It includes a number of vernal pools, forested and shrub wetlands, and adjacent upland forest that collectively provide habitat for Jefferson Salamanders.



# **BioMap: Core Habitat Summaries**

## West Stockbridge

#### **Core Habitat BM821**

#### **Natural Communities**

A mosaic of two natural communities, Acidic Rocky Summit and Ridgetop Pitch Pine-Scrub Oak communities, can be found on the ridge of Tom Ball Mountain. The Ridgetop Pitch Pine-Scrub Oak community occurs on acidic bedrock along mountain ridges, often in a mixed with an Acidic Rocky Summit community. These fire dependant communities are tolerant of extremely severe growing conditions. Where fire is repressed or infrequent, White Pines and Oaks can become more abundant. This Core Habitat contains a healthy example of both of these ridgetop communities with an intact fire regime and good Pitch Pine regeneration. This summit is well-buffered by 4,000 acres of naturally vegetated land.

# **Living Waters: Species and Habitats**

# West Stockbridge

#### Core Habitat LW268

**Plants** 

<u>Common Name</u> <u>Scientific Name</u> <u>Status</u>

Hill's Pondweed Potamogeton hillii Special Concern

Core Habitat LW297

**Plants** 

<u>Common Name</u> <u>Scientific Name</u> <u>Status</u>

Fries' Pondweed Potamogeton friesii Endangered

Hill's Pondweed Potamogeton hillii Special Concern

Water Marigold Megalodonta beckii Watch Listed

Water Star-grass Heteranthera dubia Watch Listed

**Fishes** 

<u>Common Name</u> <u>Scientific Name</u> <u>Status</u>

Longnose Sucker Catostomus catostomus Special Concern

**Core Habitat LW380** 

**Fishes** 

Common Name Scientific Name Status

Bridle Shiner Notropis bifrenatus Special Concern



# **Living Waters: Core Habitat Summaries**

# West Stockbridge

#### **Core Habitat LW268**

Hill's Pondweed, a globally rare plant species, flourishes in this small, hardwater pond. Native freshwater plants like Hill's Pondweed are an important component of aquatic ecosystems, providing habitat and nutrition for fishes and invertebrates, and adding oxygen to the water through photosynthesis.

#### Core Habitat LW297

The complex of ponds that includes Cranberry Pond, Crane Lake, Shaker Mill Pond, and Mud Ponds, along with their interconnecting streams, supports a very diverse aquatic plant community. This community consists of several rare plant species, including the Endangered Fries' Pondweed. Native freshwater plants are an important component of aquatic ecosystems, providing habitat and nutrition for fishes and invertebrates, and adding oxygen to the water through photosynthesis.

Also within this Core Habitat, the flowing waters of Cone Brook and Lenox Mountain Brook support the Longnose Sucker, a fish Species of Special Concern. This species is restricted to the western watersheds of Massachusetts, where it is found in cold, clean, oxygen-rich streams with gravel bottoms. The Longnose Sucker sometimes migrates many miles to reach its spawning grounds. The eggs are released over the gravel bottom, making them susceptible to excess sedimentation, flow alterations, and increases in water temperature. These habitat degradations can be particularly detrimental to the reproductive success of this slow-growing fish that does not reach maturity until 5 to 7 years of age. Protecting the riparian areas adjacent to this Core Habitat will help maintain the cool, clean freshwater habitat of the Longnose Sucker.

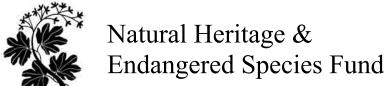
#### Core Habitat LW380

This Core Habitat supports one of nine known populations of Bridle Shiner in the Housatonic Watershed. This fish Species of Special Concern has a small range from southern New England to South Carolina, and has been declining or extirpated in much of the region. The Bridle Shiner is typically found in well-vegetated, quiet waters. It feeds on small aquatic insects and other invertebrates, and is an important part of the freshwater ecosystem as prey for larger fishes.



# Help Save Endangered Wildlife!

Please contribute on your Massachusetts income tax form or directly to the



To learn more about the Natural Heritage & Endangered Species Program and the Commonwealth's rare species, visit our web site at: <a href="www.nhesp.org">www.nhesp.org</a>.